

REMARKS

The Official Action mailed June 18, 2008, has been received and its contents carefully noted. This response is filed within three months of the mailing date of the Official Action and therefore is believed to be timely without extension of time. Filed concurrently herewith is a *Request for Continued Examination*. Accordingly, the Applicant respectfully submits that this response is being timely filed.

The Applicant notes with appreciation the consideration of the Information Disclosure Statements filed on April 25, 2006; May 23, 2006; April 20, 2007; March 3, 2008; and March 12, 2008.

A further Information Disclosure Statement is submitted herewith and consideration of this Information Disclosure Statement is respectfully requested.

Claims 1-17 and 19-22 are pending in the present application, of which claims 1, 2, 6, 7, 9, 10, 12, 16, 17 and 19 are independent. Independent claims 1, 2, 6, 7, 9, 10, 12, 16, 17 and 19 have been amended to better recite the features of the present invention. Also, the Applicant has amended dependent claims 14 and 22 for consistency and to correct minor informalities. For the reasons set forth in detail below, all claims are believed to be in condition for allowance. Favorable reconsideration is requested.

Paragraph 4 of the Official Action rejects claims 1, 2, 3, 9, 10, 12 and 14 as obvious based on the combination of U.S. Patent No. 6,541,130 to Fukuda, U.S. Publication No. 2006/0033425 to Miura, U.S. Patent No. 6,589,673 to Kido, U.S. Patent 5,670,792 to Utsugi, U.S. Publication No. 2005/0098207 to Matsumoto and Nakada, "Multi Photon Emission Organic EL Devices using Charge-Transfer Complex as Charge Generation Layer," The 63rd Autumn Meeting, IMES, Yamagata Univ., September 24, 2002, 27a-ZL-12, Page 1165 (Eng.). Paragraph 23 of the Official Action rejects claims 6, 7 and 13 as obvious based on the combination of Fukuda, Miura, Kido, Utsugi and Matsumoto. Paragraph 26 of the Official Action rejects claims 16, 17, 19 and 20 as obvious based on the combination of Fukuda, Miura, Kido, Utsugi and U.S. Patent No.

6,969,948 to Urabe. Paragraph 31 of the Official Action rejects claims 11 and 21 as obvious based on the combination of Fukuda, Kido, Utsugi, Matsumoto, Urabe and U.S. Publication No. 2005/0249974 to Mori. Paragraph 36 of the Official Action rejects claims 8 and 22 as obvious based on the combination Fukuda, Kido, Miura, Utsugi, Matsumoto, Urabe and U.S. Patent No. 6,111,274 to Arai. The Applicant respectfully submits that a *prima facie* case of obviousness cannot be maintained against the independent claims of the present application, as amended.

As stated in MPEP §§ 2142-2143.01, to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some reason, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some reason to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art. "The test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art." In re Kotzab, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000). See also In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); In re Jones, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

There is no proper or sufficient reason, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify Fukuda and Miura or to combine reference teachings to achieve the claimed invention. MPEP § 2142 states that the examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness. It is respectfully submitted that the Official Action has failed to carry this burden. While the Official Action relies on various teachings of the

cited prior art to disclose aspects of the claimed invention and asserts that these aspects could be used together, it is submitted that the Official Action does not adequately set forth why one of skill in the art would combine the references to achieve the features of the present invention.

The test for obviousness is not whether the references "could have been" combined or modified as asserted in the Official Action, but rather whether the references should have been. As noted in MPEP § 2143.01, "The mere fact that references can be combined or modified does not render the resultant combination obvious unless the results would have been predictable to one of ordinary skill in the art" (emphasis in original). KSR International Co. v. Teleflex Inc., 550 U.S. ___, ___, 82 USPQ2d 1385, 1396 (2007). Thus, it is respectfully submitted that the standard set forth in the Official Action is improper to support a finding of *prima facie* obviousness.

The Official Action concedes that "Fukuda does not explicitly disclose that the first electrode has a non-light-transmitting property" (page 4, Paper No. 20080602). The Official Action relies on Miura to allegedly teach "that the first electrode is a non-light-transmitting layer (reflective layer)" (*Id.*). The Official Action asserts that "it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Fukuda by making the first electrode a non-light-transmitting layer for advantages such as more efficient emission of light and since it has been determined that combining prior art elements according to known methods to yield predictable results is obvious" (*Id.*). The Applicant respectfully disagrees and traverses the above assertions in the Official Action.

As noted in MPEP § 2143.01, Part V, if a proposed modification renders the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. In re Gordon, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984). Also, as noted in MPEP § 2143.01, Part VI, if a proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references

are not sufficient to render the claims *prima facie* obvious. In re Ratti, 270 F.2d 810, 123 USPQ 349 (CCPA 1959).

The Official Action appears to rely on transparent electrode 3 of Fukuda to allegedly teach the first electrode of the present claims and concedes that transparent electrode 3 does not have a non-light-transmitting property. The Official Action appears to rely on the reflective electrode 11 of Miura to teach a first electrode that is a non-light-transmitting layer and asserts that it would have been obvious to replace the transparent electrode 3 of Fukuda with the reflective electrode 11 of Miura.

However, Fukuda discloses "the transparent electrode 3 comprising ITO or the like as the anode and the metal electrode 5 as the cathode" (column 6, lines 27-29) or the converse, i.e. that "the transparent electrode 3 comprising ITO or the like is used as the cathode and the metal electrode 5 as the anode" (column 6, lines 31-33). As such, Fukuda may disclose that the transparent electrode 3 may act as an anode or a cathode while the metal electrode 5 may act as an anode or a cathode, respectively. In any event, in Fukuda, in order to form a functional device, the lower electrode 3 is a transparent electrode and the upper electrode 5 is a metal electrode. Therefore, Fukuda appears to be directed to "a bottom emission type" device.

If, as proposed in the Official Action, one were to make the first electrode 3 of Fukuda a non-light transmitting layer by replacing the first electrode 3 with the reflecting electrode 11 of Miura, then light could not be emitted from the modified device, since the device would have two reflective electrodes. As such, the Examiner's proposed modification renders the prior art invention being modified unsatisfactory for its intended purpose and appears to change the principle of operation of the prior art invention being modified.

Therefore, the Applicant respectfully submits that the Official Action has not provided a proper or sufficient reason, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify Fukuda and Miura or to combine reference teachings to achieve the claimed invention.

Kido, Utsugi, Matsumoto, Nakada, Urabi, Mori and Arai do not cure the above-referenced deficiencies in Fukuda and Miura. Specifically, Kido, Utsugi, Matsumoto, Nakada, Urabi, Mori and Arai do not teach or suggest why one of ordinary skill in the art at the time of the present invention would have had a reason to combine Fukuda and Miura in such a manner that would destroy the underlying function of Fukuda.

In the present application, it is respectfully submitted that the prior art of record, either alone or in combination, does not expressly or impliedly suggest the claimed invention and the Official Action has not presented a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references.

For the reasons stated above, the Official Action has not formed a proper *prima facie* case of obviousness.

Furthermore, the prior art, either alone or in combination, does not teach or suggest all the features of independent claims 1, 2, 6, 7, 9, 10 and 12, as amended. Claims 1, 2, 6, 7, 9, 10 and 12 already recite a first electrode that has a non-light-transmitting property and have been amended to recite a first layer over and in contact with the first electrode; and a second electrode that has a light transmitting property. These features are supported in the present specification, for example, by page 7, lines 7-30, and Figure 2. Please note that the present claims, as amended, are directed to features of "a top emission type" light-emitting device, which is described in the present specification and which has a layered structure as shown, for example, in Figure 2 (reproduced below).

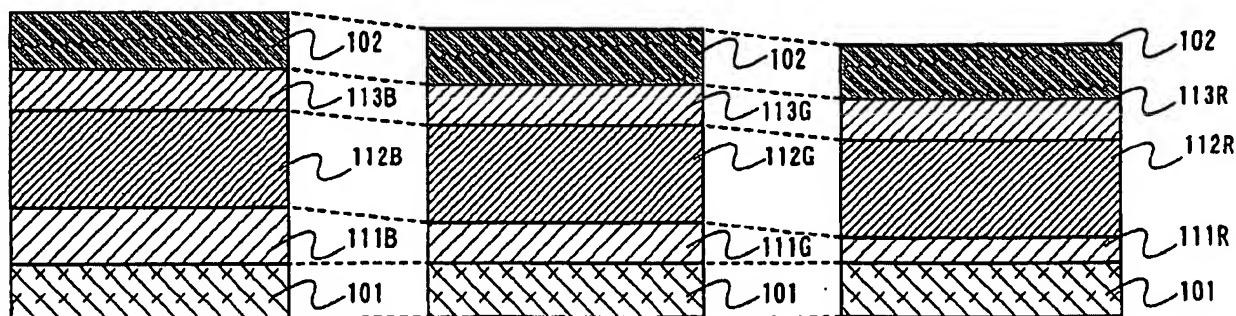


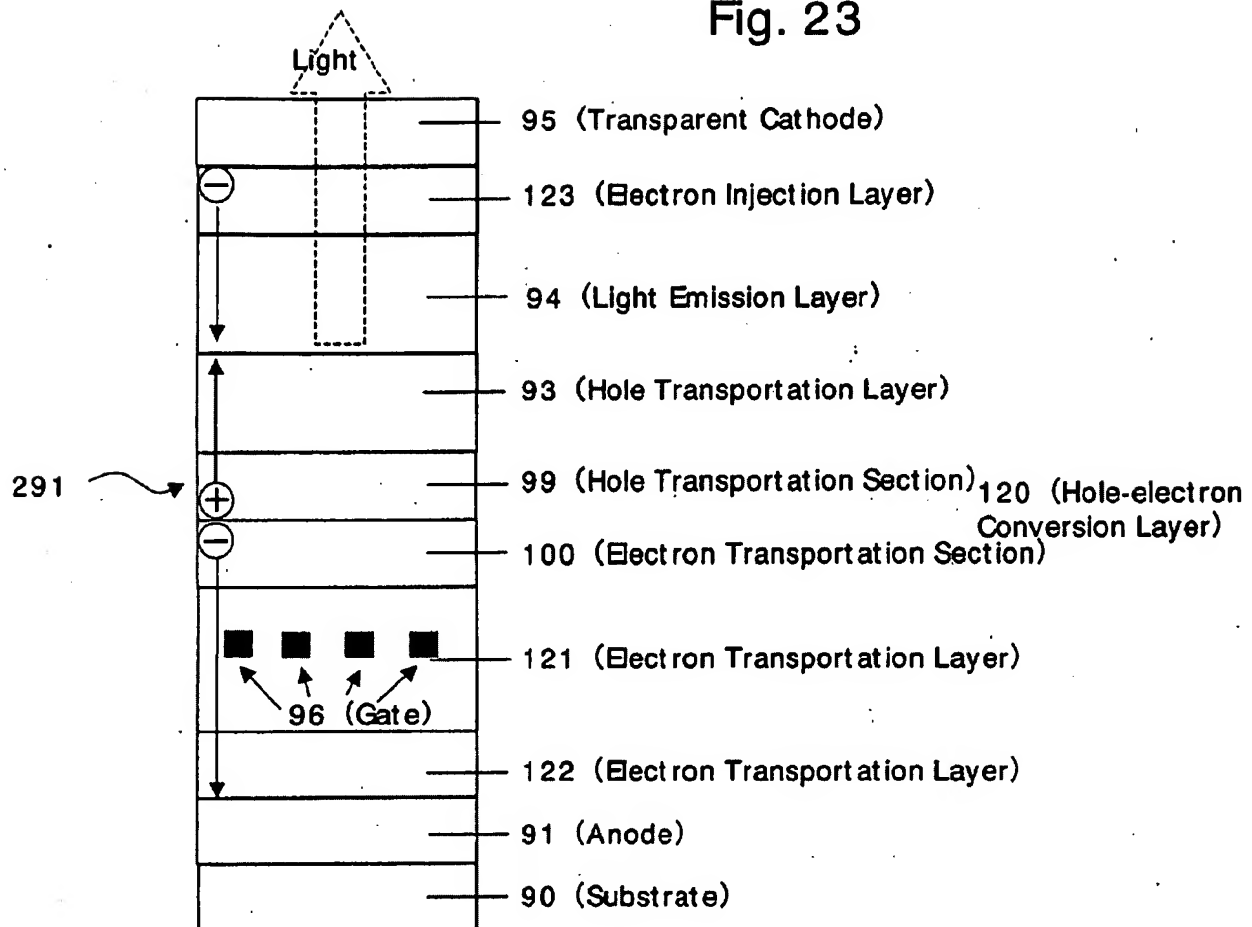
Figure 2 illustrates an example of a light-emitting device having a first electrode 101 having a non-light transmitting property, a first layer 111, a second layer 112, a third layer 113 and a second electrode 102 having a light transmitting property. The first layer 111 is formed over and in contact with the first electrode 101.

With respect to independent claims 1, 2, 6, 7, 9, 10 and 12, for the reasons provided below, the Applicant respectfully submits that Fukuda, Miura, Kido, Utsugi, Matsumoto and Nakada, either alone or in combination, do not teach or suggest the above-referenced features of the present invention.

Fukuda, Miura, Kido, Utsugi and Nakada do not appear to teach or suggest a top emission type light-emitting device.

Although Matsumoto may teach features relating to the present claims in Figure 23, this embodiment of Matsumoto does not teach or suggest a layer generating holes over and in contact with a first electrode. Specifically, Matsumoto appears to disclose a structure in which a transparent cathode 95 is formed over an anode 91 with a hole transportation layer 93, a light emission layer 94 and an electron injection layer 123 interposed therebetween (Figure 23 reproduced below).

Fig. 23



Based on this disclosure, one might argue that the hole transportation layer 93, the light emission layer 94 and the electron injection layer 123 correspond to the first, second and third layers in the present claims, respectively. However, the Applicant respectfully submits that Matsumoto fails to teach or suggest a first layer serving as a layer generating holes over and in contact with a first electrode.

Therefore, the Applicant respectfully submits that Fukuda, Miura, Kido, Utsugi, Matsumoto and Nakada, either alone or in combination, do not teach or suggest a first electrode that has a non-light-transmitting property; a first layer over and in contact with the first electrode; and a second electrode that has a light transmitting property.


Since Fukuda, Miura, Kido, Utsugi, Matsumoto and Nakada do not teach or suggest all the claim limitations, a *prima facie* case of obviousness cannot be

maintained against claims 1, 2, 6, 7, 9, 10 and 12. Accordingly, reconsideration and withdrawal of the rejections under 35 U.S.C. § 103(a) are in order and respectfully requested.

The Official Action mailed June 18, 2008, appears to be incomplete. Specifically, although claims 4 and 15 are included in the list of rejected claims in the Office Action Summary, the "Detailed Action" section appears to be silent as to dependent claims 4 and 15. For at least the reasons set forth above, the Applicant respectfully submits that claims 4 and 15 are in condition for allowance.

Should the Examiner believe that anything further would be desirable to place this application in better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,



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